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07/985,141

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
~~07/985,141~~	~~12/03/92~~	~~KATSURA~~ K	~~501.26967R00~~

24M1/0201
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EXAMINER	
ZIMMERMAN,M	
ART UNIT	PAPER NUMBER
2412	15

DATE MAILED: 02/01/96

Please find below a communication from the EXAMINER in charge of this application.

SEE ATTACHED

Commissioner of Patents

Office Action Summary	Application No. 07/985,141	Applicant(s) Katsura et al
	Examiner Mark K. Zimmerman	Group Art Unit 2412

☒ Responsive to communication(s) filed on *Dec 22, 1995*.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1-12, 14, 16, 18-34, and 44-48* is/are pending in the application.

Of the above, claim(s) *none* is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1-12, 14, 16, 18-34, and 44-48* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☒ received in Application No. (Series Code/Serial Number) *07/302,332*.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

1. Claims 1-12, 14, 16, 18-34 and 44-48 are rejected as being based upon a defective reissue declaration under 35 U.S.C. § 251. See 37 C.F.R. § 1.175.

2. In view of the fact that amendments have been made to the claims, a new/supplemental oath or declaration complying with 37 C.F.R. § 1.175(a)(1), (a)(2) and/or (a)(3), (a)(5), (a)(6), and (a)(7) is required.

The declaration filed 8-17-95 refers to the amendment filed in response to the March 9, 1994 Office Action (Amendment A filed 9-9-94) but does not refer to either of the two amendments filed since (amendment B, filed 8-17-95 and amendment C, filed 12-22-95).

3. The reissue oath or declaration filed with this application is defective because it lacks precise statements "distinctly specifying the excess or sufficiency in the claims" as required by 37 CFR 1.175 (a)(3).

Merely relisting the subject matter of each new claim does not meet the requirements of 37 CFR 1.175 (a)(3). Instead, applicants should distinctly specify the added or deleted subject matter of each new claim vis-a-vis the claims of the original patent. I.e. how each new claim differs from its closest counterpart claim in the patent (See MPEP 1414.01).

4. The reissue oath or declaration filed with this application is also defective because it fails to particularly specify the errors relied upon, as required under 37 C.F.R. § 1.175(a)(5).

The recitation of the additional claims and the very minor differences does not meet the requirement to "particularly specify the errors relied upon."

The reissue oath or declaration filed with this application is defective because it fails to particularly specify how the errors relied upon arose or occurred, as required under 37 C.F.R. § 1.175(a)(5). The declaration makes the statement at page 3 that the error was "due to the failure of the inventors and that of the Japanese Agent and U.S. Attorneys to fully appreciate and recognize that the invention could have been claimed more broadly." This statement must be corroborated by the U.S. attorneys involved in the prosecution of the patent by way of affidavit or declaration (37 CFR 1.175 (b)).

Such an affidavit or declaration should also address statements made by applicant's representative during the prosecution of the patent in the amendment filed 4-5-90. In particular, the following statement at page 15, lines 10-13 "Another feature of the invention resides in being able to use a smaller number of lines between a memory and the memory controller than are utilized between the data processor and the memory controller. Pinkham does not show or suggest this."

This rejection is directed to the new claims in the application. It is unclear why 36 claims are required to correct errors in the 8 original claims. It is unclear whether the applicant is really continuing prosecution rather than correcting errors (see In re Weiller, 229 USPQ 673). What was the void in the protection (provided by the patent claims) that necessitated all of the added claims.

Applicant is required to provide details regarding the above questions with respect to each of the added claims.

5. Claims 21, 22, 28-34 and 42 are rejected under 35 U.S.C. § 251 as not being directed to "the invention" disclosed in the original application. See MPEP 1412.01 and cases cited therein.

The original application expressly indicates the invention is an apparatus. E.g. see:

a. Title - "Graphic processing apparatus..."

b. Background - "The present invention relates to a graphic processing apparatus"

c. Summary - "object of the present invention is to provide a... processing apparatus" and "in the... apparatus according to the present invention"

d. Figures - figures 1, 2, 4 and 5a-c show apparatus but none of the figures show a flow chart describing the method.

Since the original application indicates that the apparatus itself is the invention and does not indicate that the method is also the invention, method claims 21, 22, 28-34 and 42 are rejected under 35 U.S.C. § 251 as not being directed to "the invention" disclosed in the original application.

6. Claims 14, 18, 19, 24, 25, 28-34, 36, 37, 39, 42, 43, 47 and 48 are rejected under 35 U.S.C. § 251 as not being directed to "the invention" disclosed in the original application. See MPEP 1412.01 and cases cited therein.

Claims 14, 18, 19, 24, 25, 28-34, 36, 37, 39, 42, 43, 47 and 48 are directed to accessing memory within predetermined time periods while "the invention" disclosed in the original application is for an apparatus having the disclosed architecture in order to reduce the size and cost of the apparatus.

7. Claims 10, 12 and 22 are rejected under 35 U.S.C. § 251 as an attempt to recapture canceled subject matter. See MPEP 1412.02 and cases cited therein.

The original application was filed with claims 1-7. In response to a rejection under 35 USC 103, claims 1-7 were canceled and replaced with claims 8-15 (which were then allowed and renumbered as patented claims 1-8). Canceled claim 6 read as follows:

"A graphic processing apparatus comprising:
data processing means for multiplexing an address for a memory and data so as to effect input/output operations, thereby executing a data processing;
and
means for generating clock signals having alternately different periods such that a data input/output period of time is longer than an address output period of time of said data processing means."

8. Claims 8, 9, 14, 16, 34 and 44-48 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. As per claim 8, at line 28, "forming m bit data" should read "forming n bit data".

b. As per claim 9, at line 20, "forming n bit data" should read "forming m bit data".

c. As per claim 34, at line 2, "said m(n) bits" lacks proper antecedent basis.

d. As per claim 44, at lines 28-29, it is not clear whether data from the memory (line 3) or from the storage (for temporarily storing data) is displayed.

9. Claims 14 and 18 are rejected under 35 U.S.C. § 112, fourth paragraph, as being of improper dependent form for failing to further limit the subject matter of a previous claim.

The limitations of claim 14 are included in claim 9 at lines 9-10 and 22-24. The limitations of claim 18 are included in claim 11 at lines 16 and 19-20.

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 4-7 are rejected under 35 U.S.C. § 102(e) as being anticipated by Lymelsky et al. (4,823,286).

a. As per independent claim 4, Lymelsky et al. show in figure 1 a system which includes a memory means (20), data processing means (18) and output means (output from memory 20 to a monitor). The claimed memory control means corresponds to elements shown in figure 8 and elements necessary to transfer data from the frame buffer to the monitor (see figure 1).

b. As per dependent claim 5, Lymelsky et al. show in figure 2 that each pixel include plural bits.

c. As per dependent claim 6, Lymelsky et al. disclose a system which allows for selection of the number of bits accessed

for each pixel (figures 3-7 show the different access modes allowing for 8, 4 or 1 bit per pixel to be accessed).

d. As per dependent claim 7, Lymelsky et al. disclose at column 10, lines 61-66 that a register is provided to temporarily store the data.

11. Applicant argues that the present invention differs from Lymelsky et al. because does not teach that the memory control means retrieves pixel information from the memory means in response to the data processing means, applies the retrieved pixel information to the data processing means, receives processed pixel information from the data processing means and stores processed pixel information in the memory means. These features are shown by Lymelsky et al. in figure 8 which shows means for transferring data between the memory (frame buffer data bus) and the processor (18 in figure 1) in response to the data processing means.

Applicant also argues that Lymelsky et al. does not disclose the output means is connected to the memory control means. The memory control means is claimed very broadly and can include a wide variety of structural configurations including elements at different locations which together form the claimed means. Lymelsky et al. disclose a system where the claimed memory control means corresponds to elements shown in figure 8 and

elements necessary to transfer data from the frame buffer to the monitor (see figure 1).

12. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

Claims 9-12, 14, 16, 18-34 and 44-48 are rejected under 35 U.S.C. § 103 as being unpatentable over Graciotti (4,716,527).

a. As per independent claims 9-12, 21-23, 28, 32 and 44, Graciotti discloses at column 3, lines 1-50 a system which

converts data to make an m byte wide data bus compatible with an n byte wide data bus (where n > m) by arranging or extracting upper and lower portions. Graciotti discloses at column 3, lines 9-11 and 48-50 that the operation is bidirectional. Graciotti further discloses at column 5, line 34 through column 6, line 36 that means are provided for selecting the lower byte and higher byte. It is noted that Graciotti does not explicitly disclose that graphics data is processed, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Graciotti as claimed because Graciotti discloses a bus conversion system for use in a general processing system and such systems are often used to process graphics data. It is also noted that Graciotti does not explicitly disclose that retrieval is within a memory cycle, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure Graciotti as claimed because it is well known in the art that computer systems usually define a predetermined time for accessing memory (memory access time) and Graciotti teaches that the conversion is to be transparent, therefore it would have been obvious to maintain the predefined memory access time of the processor as claimed.

b. As per dependent claims 14, 18, 19, 24, 25, 33, 46, 47 and 48, Graciotti discloses a system which changes a single 16-

bit memory access into two 8-bit memory accesses within a predetermined time (the time for the two 8-bit memory accesses).

c. As per dependent claims 16, 20, 26, 29, 30, 31 and 34, Graciotti discloses that each m (8) bit portion is either the upper or lower portion of the n (16) bit data.

d. As per dependent claim 27, Graciotti shows in figure 1 that storage means (31, 38 and 39) are provided for temporarily storing data.

e. As per dependent claim 45, it is noted that Graciotti does not explicitly disclose a multiplexor, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include this feature because Graciotti does disclose a system which selects between two portions of a word and multiplexors are often used to perform such selections.

13. Claims 1-3 and 8 are rejected under 35 U.S.C. § 103 as being unpatentable over Lymelsky et al. in view of Kinoshita (5,113,369).

The rationale provided in the rejection of claim 4 is incorporated herein. It is noted that Lymelsky et al. do not explicitly disclose a memory control means which connects a n and m bit data bus as claimed, however, this is known in the art as taught by Kinoshita (see figures 2 and 3; column 3, line 40 through column 4, line 49; column 5, lines 10-51; and claim 7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kinoshita into Lymelsky et al. because Lymelsky et al. discloses a memory with a 16-bit data bus and Kinoshita teaches how the same memory can be used by a more advanced 32-bit processor.

14. Applicant's arguments have been considered and are addressed above.

15. Because of the new grounds for rejection, this action is made NON-FINAL.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Zimmerman whose telephone number is (703) 305-9798. He can normally be reached Monday-Thursday and alternate Fridays from 7:30am-5:00pm.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Heather Herndon, can be reached on (703) 305-9701. The fax phone number for this Group is (703) 305-9724.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.

Mark K. Zimmerman
Primary Examiner
Group 2400

MZ
January 26, 1996